

DOE/MT/94014-10
(OSTI ID: 14120)

A STUDY OF THE RELATIONSHIP OF GEOLOGICAL FORMATION TO THE
NORM

Quarterly Technical Progress Report
January 1, 1997-March 31, 1997

By:
Talmage P. Bursh
Derald Chriss

Report Issue Date: April 20, 1997

Performed Under Contract No. DE-FG22-94MT94014

Southern University
Center for Energy and Environmental Studies
Baton Rouge, Louisiana

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government.

This report has been reproduced directly from the best available copy.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

A Study of the Relationship of Geological Formation to the Norm

By
Talmage P. Bursh
Derald Chriss

October 1999

Work Performed Under Contract DE-FG22-94MT94014

- Prepared for
U.S. Department of Energy
Assistant Secretary for Fossil Energy

John K. Ford, Technology Manager
National Petroleum Technology Office
P.O. Box 3628
Tulsa, OK 74101

Prepared by
Southern University
Center for Energy and
Environmental Studies
P.O. Box 9764
Baton Rouge, LA 70813

ABSTRACT

Naturally Occurring Radioactive Materials (NORM) is a common and costly contaminant of produced waters associated with natural gas production and exploration. One way of combatting this problem is by identifying the problem beforehand. Our approach to this problem involves development of NORM prediction capabilities based on the geological environment.

During the tenth quarter of this project, emphasis again remained on two major tasks; identifying new sampling sites and seeking approval for final project revisions. In light of the delays experienced, the project has been granted a one year extension, and a revision is currently under review.

TABLE OF CONTENTS

	PAGE
Disclaimer	i
Abstract.....	ii
Executive Summary	1

Project Introduction	1
Results and Discussion	1
Conclusion	1

EXECUTIVE SUMMARY:

The Southern University Center for Energy and Environmental Studies along with partners Louisiana State University's Basin Research Institute (BRI), and the U.S. Geological Survey (USGS) have teamed up to explore relationships between geological and radiological factors (NORM). Each of these partners will employ their specific areas of expertise in developing predictive capabilities with respect to NORM in the produced waters associated with natural gas exploration.

The tenth quarter of the project continues to experience major setbacks from the Consolidated Natural Gas (CNG) withdrawal from the effort due to financial considerations. This has resulted in the major project modifications, now under review. In light of the delays experienced, the project has been granted a one year extension.

PROJECT INTRODUCTION:

This project was to consist of four major tasks: (1) EMWAL Development, (2) Chemical and Radiological Analysis, (3) Correlative Results with Respect to NORM Activity and geological parameters (Geo-environmental maps), and (4) Technology Transfer. Proposed revisions will however, force changes to the above mentioned tasks, particularly with respect to EMWAL development.

The radiological and minor chemical analysis of samples will take place at Southern University with the geo-environmental results being generated at Louisiana State University.

RESULTS AND DISCUSSION:

During this reporting period, efforts were again geared towards guidance and acquiring approval of revisions from the DOE Project Officer and from the Contract Officer. The appropriate methods, etc., continue to be updated and/or modified. We have received word that the proposed revisions are in the final review stages and that a decision should be forthcoming shortly regarding the future of the project.

CONCLUSION:

We are still in the process of identifying a new industrial partner, hopefully one with well sites in Vermillion Parish. This would be essential in that the preliminary geological (PARS) data obtained has focused on the Vermillion Parish area.

Project revisions have been forwarded to the Project Officer at Bartlesville and the Contracting Officer at PETC for final review and guidance. The project has been granted an extension to October 31, 1997, and is under further review. We still however, await word on the project's future.